

**To:** Robert R Seal [rseal@usgs.gov]  
**Cc:** CN=Cindi Godsey/OU=R10/O=USEPA/C=US@EPA;CN=Glenn Suter/OU=CI/O=USEPA/C=US@EPA;CN=Lorraine Edmond/OU=R10/O=USEPA/C=US@EPA;CN=Patricia McGrath/OU=R10/O=USEPA/C=US@EPA;CN=Phil North/OU=R10/O=USEPA/C=US@EPA;CN=Richard Parkin/OU=R10/O=USEPA/C=US@EPA[]; N=Glenn Suter/OU=CI/O=USEPA/C=US@EPA;CN=Lorraine Edmond/OU=R10/O=USEPA/C=US@EPA;CN=Patricia McGrath/OU=R10/O=USEPA/C=US@EPA;CN=Phil North/OU=R10/O=USEPA/C=US@EPA;CN=Richard Parkin/OU=R10/O=USEPA/C=US@EPA[]; N=Lorraine Edmond/OU=R10/O=USEPA/C=US@EPA;CN=Patricia McGrath/OU=R10/O=USEPA/C=US@EPA;CN=Phil North/OU=R10/O=USEPA/C=US@EPA;CN=Richard Parkin/OU=R10/O=USEPA/C=US@EPA[]; N=Patricia McGrath/OU=R10/O=USEPA/C=US@EPA;CN=Phil North/OU=R10/O=USEPA/C=US@EPA;CN=Richard Parkin/OU=R10/O=USEPA/C=US@EPA[]; N=Phil North/OU=R10/O=USEPA/C=US@EPA;CN=Richard Parkin/OU=R10/O=USEPA/C=US@EPA[]; N=Richard Parkin/OU=R10/O=USEPA/C=US@EPA[]  
**From:** CN=Barbara Butler/OU=CI/O=USEPA/C=US  
**Sent:** Thur 7/21/2011 10:02:25 PM  
**Subject:** Re: Mining Scenario  
Mine Scenario Outline GS Bob BAB.docx

I have added a few things to Glenn's and Bob's stuff.

Cheers,  
Barb

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Barbara A. Butler, PhD  
Research Physical Scientist  
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From: Robert R Seal <rseal@usgs.gov>  
To: Glenn Suter/CI/USEPA/US@EPA  
Cc: Barbara Butler/CI/USEPA/US@EPA, Lorraine Edmond/R10/USEPA/US@EPA, Cindi Godsey/R10/USEPA/US@EPA, Patricia McGrath/R10/USEPA/US@EPA, Phil North/R10/USEPA/US@EPA, Richard Parkin/R10/USEPA/US@EPA  
Date: 07/21/2011 01:56 PM  
Subject: Re: Mining Scenario

Hi,

I have tried to add some details and thoughts to Phil and Glenn's start.

Bob  
+++++  
Robert R (Bob) Seal, II  
US Geological Survey

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From: Glenn Suter <suter.glenn@epamail.epa.gov>  
To: Phil North <North.Phil@epamail.epa.gov>  
Cc: Barbara Butler <Butler.Barbara@epamail.epa.gov>, Cindi Godsey  
<Godsey.Cindi@epamail.epa.gov>, Lorraine Edmond <Edmond.Lorraine@epamail.epa.gov>, Patricia  
McGrath <McGrath.Patricia@epamail.epa.gov>, Richard Parkin <Parkin.Richard@epamail.epa.gov>,  
rseal@usgs.gov  
Date: 07/21/2011 10:47 AM  
Subject: Re: Mining Scenario

Quick response  
(See attached file: Mine Scenario Outline\_GS.docx)

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|Phil North/R10/USEPA/US |  
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| To: |  
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|Patricia McGrath/R10/USEPA/US@EPA |  
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| Cc: |  
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|Glenn Suter/CI/USEPA/US@EPA, rseal@usgs.gov, Cindi Godsey/R10/USEPA/US@EPA, Barbara  
Butler/CI/USEPA/US@EPA, Lorraine |  
|Edmond/R10/USEPA/US@EPA, Richard Parkin/R10/USEPA/US@EPA |  
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|Re: Mining Scenario |  
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(b) (5)

I offer the draft below as an initiation of the discussion. Be sure to respond to all.

[attachment "Mine Scenario Outline.docx" deleted by Glenn Suter/CI/USEPA/US]

Phillip North  
Ecologist  
Environmental Protection Agency  
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(907) 714-2483  
fax 260-5992  
north.phil@epa.gov

"To protect your rivers, protect your mountains."

From: Patricia McGrath/R10/USEPA/US  
To: Glenn Suter/CI/USEPA/US@EPA  
Cc: Phil North/R10/USEPA/US@EPA, rseal@usgs.gov, Glenn Suter/CI/USEPA/US@EPA, Cindi Godsey/R10/USEPA/US@EPA, Barbara Butler/CI/USEPA/US@EPA, Lorraine Edmond/R10/USEPA/US@EPA  
Date: 07/20/2011 01:58 PM  
Subject: Re: Mining Scenario

This approach sounds good to me.

From: Glenn Suter/CI/USEPA/US  
To: Phil North/R10/USEPA/US@EPA  
Cc: rseal@usgs.gov, Glenn Suter/CI/USEPA/US@EPA, Cindi Godsey/R10/USEPA/US@EPA, Patricia McGrath/R10/USEPA/US@EPA,

Barbara Butler/CI/USEPA/US@EPA, Lorraine  
Edmond/R10/USEPA/US@EPA  
Date: 07/16/2011 07:24 AM  
Subject: Re: Mining Scenario

Phil--As I said to you in Anchorage, I think this is the best way to proceed.

However, if it creates difficulties or significant delays we could do it by a combination of conference calls and exchanging drafts.

1. Draft outline by Phil
2. Revise outline and make writing assignments--conference call
3. Drafts by primary authors possibly working with co-authors
4. Comments and revisions by group
5. Discussion of drafts and agreement on points of difference--conference call
6. Revisions by primary and co-authors.

Concerning Barbara, she is part of this group to the extent that she has the time.

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|Phil North/R10/USEPA/US |  
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| To: |  
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|rseal@usgs.gov, Glenn Suter/CI/USEPA/US@EPA, Cindi Godsey/R10/USEPA/US@EPA, Patricia  
McGrath/R10/USEPA/US@EPA, Barbara |  
|Butler/CI/USEPA/US@EPA, Lorraine Edmond/R10/USEPA/US@EPA  
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|Mining Scenario |  
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Hello mine scenario development group.

First a couple of details - Patty, I was told this week that you are still working with us and are on this subgroup, so you are included here.

Barb, I was not clear after our meeting if you are part of this group. Glenn, is Barb part of this group?

The decision at the meetings this week was that we would limit our mine scenario development to porphyry copper. We will use the 2006 NDM water rights proposal to ADNR and the 2011 economic viability report from NDM as the basis for our hypothetical but plausible mining scenario. We understand that any proposal to mine porphyry copper in the Bristol Bay, whether in the vicinity of the Koktuli River, Kemuk Mountain or anywhere else, may deviate in its details, but will likely use the primary features of what we describe. Our goal in developing a mining scenario will be to describe a plausible mine in as much detail as we can. But we understand that while primary features such as an open pit, a tailings impoundment and a mill will very likely be common to any mine that is constructed, other characteristics such as the quality of the tailing, waste rock and discharge (if any) will be estimated as a range of values gathered from sites around the world. We will be as specific and complete as we can confidently be, but no more. And we will qualify all of our judgements.

It is my feeling that the most efficient way to get this task done is for all of us to meet in a room for a week with pen and paper. That would mean most of us traveling to Seattle, DC or Cincinnati. A trip to Anchorage seems out of the question, much less to Soldotna.

Alternately we could do this by phone or video, but I strongly feel that we need to get together. It is my understanding that the Cincinnati folks will have a hard time with travel funds, so perhaps we should go there.

Finally, we should do this soon.

If it is was not late on a beautifully sunny Friday with salmon running in the Kenai River I would send a draft agenda. But that will have to wait till Monday.

What do you all think so far?

Phil

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fax 260-5992  
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"To protect your rivers, protect your mountains." [attachment "Mine Scenario Outline\_GS.docx" deleted by Robert R Seal/GD/USGS/DOI]

[attachment "Mine Scenario Outline\_GS\_Bob.docx" deleted by Barbara Butler/CI/USEPA/US]